

## Attachment 4: Project Description

### County-Wide Groundwater Elevation Monitoring Program Local Groundwater Assistance Program Grant Application

#### Background

On November 4, 2009 the California Water Code was amended with SBx7-6 by the State Legislature. SBx7-6 mandates a statewide groundwater elevation monitoring program to track seasonal and long-term trends in groundwater elevations. This program requires collaboration between the Department of Water Resources (DWR) and local monitoring entities to collect groundwater elevation data. In response to SBx7-6 DWR has developed the California Statewide Groundwater Elevation Monitoring (CASGEM) program to “establish a permanent, locally-managed program of regular and systematic monitoring in all of California’s alluvial groundwater basins.” (CASGEM, 2011)

Ninety-one (91) groundwater basins exist within the County of San Bernardino per Bulletin 118. Currently, five monitoring agencies within the County have developed or are developing monitoring plans to comply with CASGEM for the areas they serve:

- 29 Palms Water District
- Big Bear Community Services District
- Chino Basin Watermaster
- Mojave Water Agency
- San Bernardino Valley Municipal Water District

The five agencies combined cover all or portions of 45 out of the 91 basins within the County. The remaining 44 basins are currently unmonitored, and some currently-monitored basins may not have sufficient coverage to comply with CASGEM.

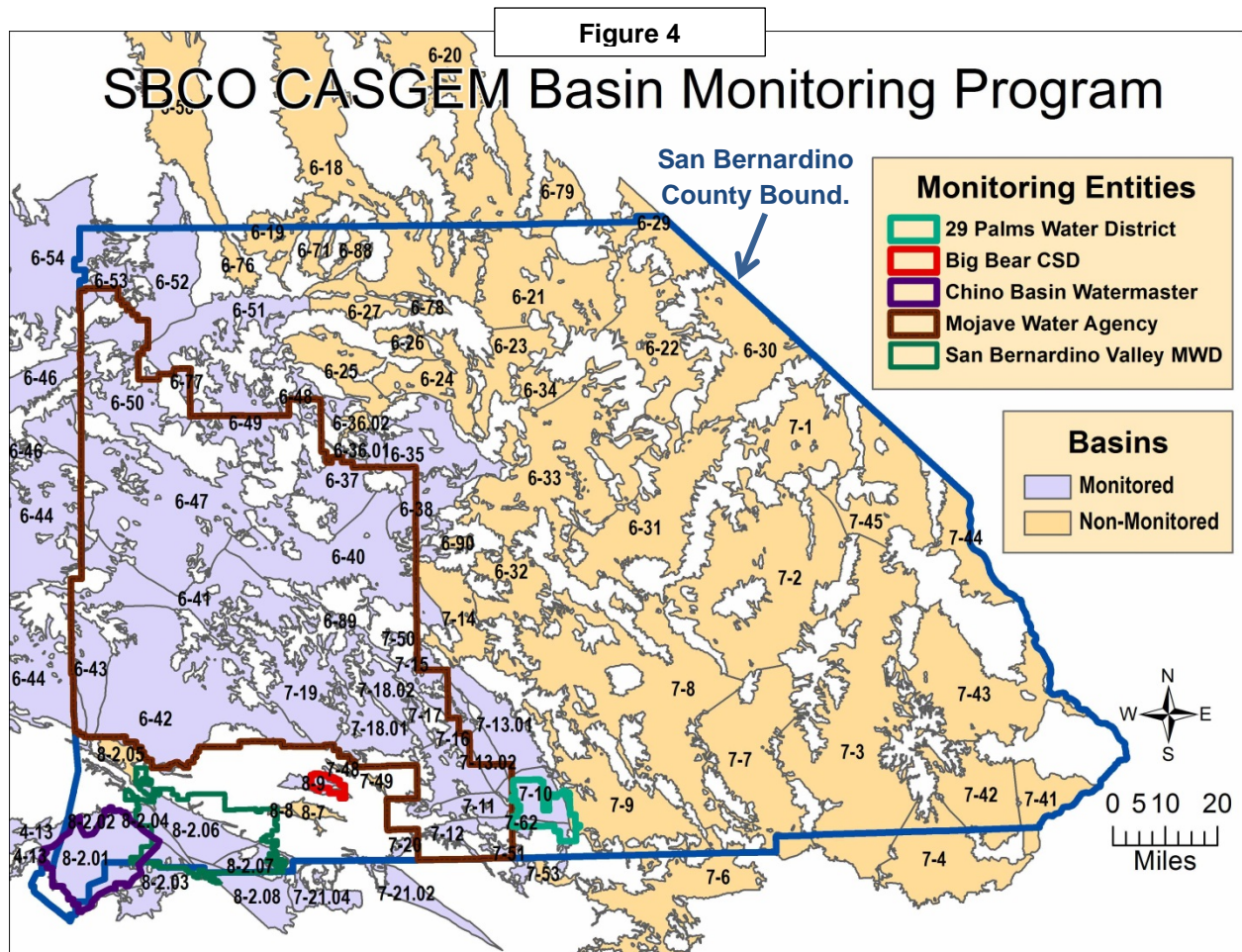
#### Project Goal

The goal of this project is to bring all groundwater basins within San Bernardino County into compliance with the California State Groundwater Elevation Monitoring (CASGEM) program.

#### Project Summary

Mojave Water Agency (MWA) has taken the lead to coordinate with the other CASGEM-reporting agencies to develop a monitoring plan for the unmonitored basins within the County, in order to bring the entire county into compliance with CASGEM. **Figure 4** illustrates the location of the monitored and unmonitored Bulletin 118 groundwater basins relative to San Bernardino County boundaries and CASGEM reporting agencies. Note that this figure represents MWA’s preliminary evaluation of the monitoring status of the groundwater basins. All basins in the county, including those that fall wholly or partially within CASGEM reporting agencies’ boundaries, will be evaluated for adequacy of coverage.

If awarded, the grant funds would be used to pay a consultant to work collaboratively with Mojave Water Agency (MWA), other water agencies, and the County to conduct the necessary work to comply with CASGEM for all groundwater basins within the county. Work products will include individual monitoring reports for the unmonitored basins and a countywide monitoring plan which outlines how future monitoring and reporting will be conducted by the stakeholders. A task has also been included in the work plan to review the San Bernardino County Groundwater Ordinance for consistency with CASGEM and Groundwater Management Planning law, and provide recommendations for potential revisions or updates



### Relationship to Groundwater Management Plan

This project is directly related, and expands upon, objectives and actions set forth in MWA's Groundwater Management Plan (GWMP). The GWMP is integrated into the 2004 Regional Water Management Plan (RWMP). Chapter 9 of the RWMP/GWMP set Basin Management Objectives for the MWA area, including objectives to "Stabilize the groundwater basin storage over long-term hydrologic cycles" and "Limit the potential for well dewatering, land subsidence, and migration of poor quality water."<sup>1</sup> Pursuant to those objectives, MWA established a groundwater level monitoring program which now includes 396 monitoring wells from which water level measurements are taken. Chapter 10 of the RWMP/GWMP identifies several actions MWA is currently implementing to ensure areas of heavy groundwater pumping and groundwater recharge have adequate water level monitoring, that existing wells and monitoring programs are maintained, and that gaps in data are identified and filled when possible. If awarded, this grant will contribute to the furtherance of objectives contained in the RWMP/GWMP.

### Technical Methodology

Most of the unmonitored basins within San Bernardino County are located in remote areas with little or no land use activity, which will make evaluating the impacts of anthropogenic activities relatively easy. Each basin will initially be evaluated using geospatial tools to estimate the use of groundwater. MWA has

<sup>1</sup> Mojave Water Agency 2004 Regional Water Management Plan

already developed a protocol which can be applied to each of these basins to create a water budget of the annual water production utilizing aerial photography and parcel datasets from the County Assessor (for a more detailed description of methodologies and example of analysis to be used, see Attachment 8). After the water budget is complete, basins will be grouped into two categories:

1. Material water use occurs in the basin and therefore regular monitoring is required;
2. Material water use does not occur in the basin and therefore it qualifies for Alternate Monitoring

A monitoring program will be developed and submitted to the Department of Water Resources (DWR) for each basin, as well as an overarching monitoring plan outlining the county-wide program for CASGEM compliance. For basins where regular monitoring is required, wells will be located which provide adequate coverage to evaluate the health of groundwater elevations in the basins, and monitoring and reporting plans will be developed. For wells where Alternate Monitoring is sufficient, reports will be prepared which demonstrate the basin qualifies for Alternate Monitoring. The countywide monitoring plan will outline how future monitoring will occur and identify agencies responsible for conducting future monitoring and reporting.

The project will accomplish the following major objectives:

- Evaluate the unmonitored groundwater basins with the County and determine whether material water use is occurring in each. Determine if each basin falls under regular monitoring or is eligible for Alternate Monitoring.
- Establish monitoring program for basins with material water use needing regular monitoring.
- Prepare reports for basins that qualify for Alternate Monitoring.
- Prepare county-wide CASGEM monitoring plan, including entities responsible for continued monitoring and reporting.
- Review the San Bernardino County Groundwater Ordinance for consistency with CASGEM and Groundwater Management Planning law, and provide recommendations for potential revisions or updates.

### **Stakeholder Collaboration and Public Outreach**

MWA is taking the lead on this project, but is coordinating with the other CASGEM reporting agencies within the County to complete the work. Letters of support from participating agencies are enclosed in Att2\_LGA12\_Mojave\_EligDoc\_3of3.pdf. In addition to participation from CASGEM reporting agencies, it is anticipated that we will be collaborating with other water districts or private well owners where needed to obtain groundwater elevation measurements in areas where we do not currently have data.

In addition to targeted collaboration with the other CASGEM reporting agencies, MWA is coordinating with the County of San Bernardino to receive broader stakeholder involvement. As this is only a monitoring program, it is not anticipated to have a material impact on members of the general public. However, MWA will work with County staff to develop a county-wide public outreach that provides the public with an opportunity to comment on the project. It is anticipated the outreach forum would be similar to MWA's Technical Advisory Committee (TAC), which occur in a workshop setting and in which local water agencies, state and federal agencies, environmental organizations, and members of the public are informed of the project and allowed to provide input.

### **Ongoing Use of Products and Future Funding**

This grant will fund the development of a countywide monitoring plan and initial monitoring reports for the unmonitored groundwater basins within San Bernardino County. Work in the future will consist of continuing the physical monitoring of the basins and updating and submitting reports on a regular basis.

It is anticipated that many of those basins will qualify for Alternate Monitoring, therefore minimizing work that will be required in the future to keep the basins in compliance with CASGEM. The monitoring program will identify participants responsible for monitoring various locations as needed to remain in compliance. Once the monitoring program is nearing completion and the level of effort required is known, MWA and the other CASGEM reporting agencies within the County will develop agreements that outline an equitable share in responsibility among the agencies for the regular monitoring and reporting of the basins in the program. It is anticipated that each agency will fund their own efforts toward maintaining their share of the program.